IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Peter de Groot et al.   Art Unit   : 2877
Patent No. : 7,106,454   Examiner : Michael A. Lyons
Issue Date : September 12, 2006
Serial No. : 10/795,808
Filed   : March 8, 2004
Title   : PROFILING COMPLEX SURFACE STRUCTURES USING SCANNING
             INTERFEROMETRY

Attn.: Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

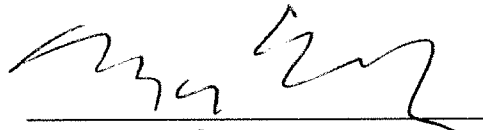## TRANSMITTAL OF REQUEST FOR CERTIFICATE OF CORRECTION

Applicant hereby requests that a certificate of correction be issued for the above patent in accordance with the attached request.

One or more of the errors sought to be corrected were made by applicant. The fees in the amount of $100 to cover the required fee of 37 CFR §1.20(a) are being paid concurrently on the Electronic Filing System (EFS) by way of Deposit Account authorization.

Please apply any charges or credits to Deposit Account No. 06-1050, referencing 09712-341001.

Respectfully submitted,

Date: 2/6/08

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PATENT NO.   .: 7,106,454

APPLICATION NO   .: 10/795,808

DATED   .: SEPTEMBER 12, 2006

INVENTOR(S)   .: PETER DE GROOT, ROBERT STONER AND XAVIER COLONNA DE LEGA

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 2
Line 26, delete "that" after "about"

Column 3
Line 54, insert --a-- before "second"

Column 5
Line 16, replace "profiled" with --profile--
Line 37, delete "a" after "to"

Column 6
Line 28, insert --be-- after "may"

Column 8
Line 18, replace "signals" with --signal--

Column 9
Line 56, replace "displays" with --display--

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 9 Cont.
Line 57, replace "transmits" with --transmit--

Column 10
Line 57, replace "objectives" with --objective--

Column 13
Line 54, insert --be-- after "may"

Column 14
Line 63, delete "is" after "polarizer"

Column 19
Line 25, replace "that" with --than--

Column 21
Line 66, replace " $q_{\beta,k} = q_{\beta,k}{}^{s} + q_{\beta,k}{}^{p}$ " with -- $q_{\beta,k} = q_{\beta,k}^{s} + q_{\beta,k}^{p}$ --

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 22

Line 4, replace "$\left\langle \phi''_{\beta,k} \right\rangle = \arg\left(q_{\beta,k}{}^{s} + q_{\beta,k}{}^{p} \right)$" with -- $\left\langle \phi''_{\beta,k} \right\rangle = \arg\left(q^{s}_{\beta,k} + q^{p}_{\beta,k} \right)$ --

Line 8, replace "$\left\langle \phi''_{\beta,k} \right\rangle \neq \left(\phi''_{\beta,k}{}^{s} + \phi''_{\beta,k}{}^{p} \right)/2$" with -- $\left\langle \phi''_{\beta,k} \right\rangle \neq \left(\phi''^{s}_{\beta,k} + \phi''^{p}_{\beta,k} \right)/2$ --

Line 12, replace "$\left\langle Q_{\beta,k} \right\rangle \neq \left(Q_{\beta,k}{}^{s} + Q_{\beta,k}{}^{p} \right)/2$" with -- $\left\langle Q_{\beta,k} \right\rangle \neq \left(Q^{s}_{\beta,k} + Q^{p}_{\beta,k} \right)/2$ --

Line 15, replace "$R_{\beta,k}{}^{s}, R_{\beta,k}{}^{p}$ and $Z_{\beta,k}{}^{s}, Z_{\beta,k}{}^{p}$" with -- $R^{s}_{\beta,k}, R^{p}_{\beta,k}$ and $Z^{s}_{\beta,k}, Z^{p}_{\beta,k}$ --

Column 23
Line 23, insert --are-- after "we"

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 24

Line 25, replace "
$$\vartheta^{p}_{1,\beta,k} = -\frac{\tan\left(\psi_0 - \psi_{1,\beta,k}\right)}{\tan\left(\psi_0 + \psi_{1,\beta,k}\right)}$$
" with

$$-- \vartheta^{p}_{1,\beta,k} = -\frac{\sin\left(\psi_0 - \psi_{1,\beta,k}\right)}{\sin\left(\psi_0 + \psi_{1,\beta,k}\right)} --$$

Line 38, replace "
$$\vartheta^{s}_{2,\beta,k} = -\frac{\tan\left(\psi_{1,\beta,k} - \psi_{2,\beta,k}\right)}{\tan\left(\psi_{1,\beta,k} + \psi_{2,\beta,k}\right)}$$
" with

$$-- \vartheta^{s}_{2,\beta,k} = -\frac{\sin\left(\psi_{1,\beta,k} - \psi_{2,\beta,k}\right)}{\sin\left(\psi_{1,\beta,k} + \psi_{2,\beta,k}\right)} --$$

Line 47, replace "$z_{\beta,k} = \theta_{1,\beta,k}$ (simple surface, no thin film)" with

$$-- z_{\beta,k} = \vartheta_{1,\beta,k} \quad \text{(simple surface, no thin film)} --$$

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 24 Cont.

Line 52, replace "$\omega_{\beta,k} = \arg\left(\theta_{1,\beta,k}\right)$" with -- $\omega_{\beta,k} = \arg\left(\vartheta_{1,\beta,k}\right)$ --

Column 27

Line 8, replace "100xMirau" with --100X MIRAU--

Column 29

Line 10, replace "40 mm" with --40 nm--

Line 11, replace "498 mm" with --498 nm--

Line 21, replace "300 run" with --300 nm--

Line 52, replace "removes" with --remove--

Column 30

Line 23, replace "$q_{K>0}{}^{ex} = M^{-1}\exp\left[-i\gamma_{sys} - i\left(K - K0\right)\tau_{sys}\right]q_{K>0}{}^{ex}$" with

-- $q_{K>0}^{ex} = M^{-1}\exp\left[-i\gamma_{sys} - i\left(K - K0\right)\tau_{sys}\right]q_{K>0}^{ex}$ --

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 30
Line 33, replace "functions" with --function--
Line 50, replace "$\Gamma_{sys} = K0\,h'$" with -- $\gamma_{sys} = K0\,h'$ --

Column 31
Line 49, replace "signals in" with --signals--

Column 32
Line 48, replace "consider to" with --consider--
Line 56, delete "a"

Column 33
Line 1, insert "be" after "can"
Line 26, replace "analysis the" with --analysis that--
Line 54, delete "be" after "would"

Column 34
Line 5, replace "$I_{temp}{}^{j}\left(\zeta\right) = m_{temp}{}^{j}\left(\zeta\right)\cos\left[K_0\zeta + \phi_{temp}{}^{j}\left(\zeta\right)\right]$" with

-- $I_{temp}^{j}\left(\zeta\right) = m_{temp}^{j}\left(\zeta\right)\cos\left[K_0\zeta + \varphi_{temp}^{j}\left(\zeta\right)\right]$ --

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It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

<u>Column 34 Cont.</u>

Line 7, replace "$m_{temp}{}^{j}(\zeta)$ and $\phi_{temp}{}^{j}(\zeta)$" with -- $m_{temp}^{j}(\zeta)$ and $\varphi_{temp}^{j}(\zeta)$ --

Line 11, replace "$m_{temp}{}^{j}(\zeta)$ and $\phi_{temp}{}^{j}(\zeta)$" with -- $m_{temp}^{j}(\zeta)$ and $\varphi_{temp}^{j}(\zeta)$ --

Line 15, replace "$\overline{I}_{temp}{}^{j}(\zeta) = m_{temp}{}^{j}(\zeta)\exp\left[i\left(K_0\zeta + \varphi_{temp}{}^{j}(\zeta)\right)\right]$" with

-- $\overline{I}_{temp}^{j}(\zeta) = m_{temp}^{j}(\zeta)\exp\left[i\left(K_0\zeta + \varphi_{temp}^{j}(\zeta)\right)\right]$ --

Line 25, replace "$\tilde{I}_{pat}{}^{k}(\zeta) = w(\zeta)\overline{I}_{temp}{}^{k}(\zeta)$" with

-- $\tilde{I}_{pat}^{k}(\zeta) = w(\zeta)\overline{I}_{temp}^{k}(\zeta)$ --

Line 37, replace "$\tilde{I}_{pat}{}^{j}$" with -- $\tilde{I}_{pat}^{j}$ --

<u>Column 35</u>

Line 8, replace "$m_{temp}{}^{j}$" with -- m_{temp}^{j} --

Lines 11 and 12, replace "$\phi_{ex}, \phi_{pat}{}^{j}$" with -- $\varphi_{ex}, \varphi_{pat}^{j}$ --

Line 15, replace "$\tilde{I}_{pat}{}^{j}$" with -- $\tilde{I}_{pat}^{j}$ --

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Column 35 Cont.

Line 56, replace " $\left\langle \left| \tilde{I}_{ex}\left(\zeta\right) \right|^2 \right\rangle \leftarrow \left\langle \left| \tilde{I}_{ex}\left(\zeta\right) \right|^2 \right\rangle + MinDenom \cdot \max(< \left| \tilde{I}_{ex} \right|^2 >) $ " with

$$ -- \left\langle \left| \tilde{I}_{ex}\left(\zeta\right) \right|^2 \right\rangle \leftarrow \left\langle \left| \tilde{I}_{ex}\left(\zeta\right) \right|^2 \right\rangle + MinDenom \cdot \max \left(\left\langle \left| \tilde{I}_{ex} \right|^2 \right\rangle \right) -- $$

Column 39
Claim 12, line 24, delete "a" before "expressed"

Column 42
Claim 60, line 30, delete "a" before "expressed"

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